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7 July 1958

MEMORANDUM FOR THE RECORD

SUBJECT: Intelligence Concerning Soviet Tanks

1. Information concerning the Soviet T-54 and JS-III tanks has been obtained from two sources, Army Chemical Center via Art Alper and CIA/OSI, [redacted] mentioned that should TSS/ED have need for scientific intelligence of any nature, he should be contacted in this regard. 25X1

2. The following information was obtained from the Army Chemical Center:

T-54 Tank

Total Hull Armor	26,870.94
Total Turret Armor	9,026.48
	35,897.42

Armor Characteristics

Armor	Obliquity	Normal Thickness	Horizontal Thickness
Upper Glacis Plate	55°	3.938 inches	6.85
Lower Glacis Plate	55°	3.938	6.85
Side Plates	0°	2.56	2.56
Lower Side Plates	30°	2.165	2.5
Final Dr. Housing (Side)	0°	2.165	2.165
Final Dr. Housing (Cast Shell)		1.181	
Rear Plate	13°	2.165	2.22
Rear Lower Plate	63°	1.378	3.03"
Fighting Comp. Deck		1.181	
Engine Comp. Deck		.7875	
Hull Top Plate		.9845	
Side Bulge (Cast)		2.56 on side approx 4" at top to support turret race	
Turret Front	Base	3.55	
Turret Side (center Line)	Base	3.22	
Turret Rear	Base	2.30	
Turret Roof		1.575	
Cupolas	35°	1.181	1.44

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Tank Characteristics

Overall length (w/o gun)	262.2 inches
Overall height (excluding antenna)	94.4
Overall width	127.95
Length of hull	238
Width of hull (excluding bulge)	79.2
Ground Clearance	17.32
Track width	22.43
Center to center of tracks	104.2
Track length on ground or center to center of 1st and5th RW	151.2
Roadwheel diameter	32.48
Track area on ground	7000 in^2
Ground pressure	11.314 lb/in^2
Center to center of 1st and 2nd Road wheel	46.25
Center to center of 2nd and 3rd - 3rd and 4th RW	34.9
Diameter of Idler Wheel	20.45
Diameter of drive sprocket	27.3

3. The following information was obtained from CIA/Office of Scientific Intelligence:

JS-III

Hull armor type -- cost plate, welded

Armor	Obliquity	Normal Thickness	Horizontal Thickness
Front upper plate	55°	4.7 in.	8.2
Front lower plate	55°	4.3	7.5
Side upper plate	45°	2.4	3.40
Side lower plate	0°	3.5	3.5
Rear upper plate	45°	2.5	3.54
Rear lower plate	45°	2.5	3.54
Top			
a. Front		2.4	
b. Rear		1.4	
Belly			
a. Fighting		2.4	
b. Engine		.8	
Turret Armor Type - Cast			
Front	?	4.3	?
Sides	?	4.3	?
Rear	?	4.5	?
Top	?	1.2	?

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T-54 Tank

Hull armor type -- rolled plate, welded

Armor	Obliquity	Normal Thickness	Horizontal Thickness
Front upper	60°	3.4 in	6.8"
Front lower	?	3 in	?
Side upper	0°	2-3 in.	2-3 in.

Turret armor type - cast

Front	50°	3-4 in.	4.67 - 6.22

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